Spatial patterns of urban sex trafficking

Deborah Mletzko, Lucia Summers*, Ashley N. Arnio

School of Criminal Justice, Texas State University, United States

ABSTRACT

Purpose: This study examines the extent of spatial concentration of sex trafficking within an urban setting. The influence of situational and socio-demographic neighborhood variables on such patterns is then investigated within the framework of crime opportunity and social disorganization theories.
Methods: Kernel density estimation and spatial clustering tests are used to analyze the distribution of sex trafficking offenses recorded between 2013 and 2015 in Austin, Texas. Negative binomial regression models are then estimated to examine the influence of situational and neighborhood variables on sex trafficking, using the census block group as the unit of analysis.
Results: The analyses reveal a significant geographic clustering of sex trafficking offenses that is positively associated with proximity to the interstate highway, the number of cheaper hotels/motels and sexually oriented businesses, and concentrated disadvantage. Other variables (distance from the local truck stop, residential instability, and racial/ethnic heterogeneity) were not significantly associated with sex trafficking.
Conclusions: These findings are largely consistent with criminological theories that emphasize the physical and social environment in facilitating crime. An understanding of the situational and neighborhood factors driving these spatial concentrations can inform intervention efforts by law enforcement and other agencies aimed at disrupting the underlying support structure of sex trafficking.

1. Introduction

Sex trafficking is one of the fastest-growing types of organized crime and the third largest criminal enterprise in the world (Walker-Rodriguez & Hill, 2011; see also United Nations on Drugs and Crime, 2016). The crime of sex trafficking involves "a commercial sex act [that] is induced by force, fraud, or coercion, or in which the person induced to perform such act has not attained 18 years of age" (United States Code, Title 22, Chapter 78 § 7102).[1] Globally, the number of identified victims of sex trafficking was 49,055 in 2016, which encompassed 74% of all human trafficking victims (U.S. Department of State, 2017), although some agencies have estimated the number of sex trafficking victims to be as high as 4.8 million (e.g., International Labour Organization and Walk Free Foundation, 2017). In that same year, federal task forces in the U.S. opened over 3,000 human trafficking investigations (U.S. Department of State, 2017); previous estimates indicate that 75–80% of those cases likely involved sex trafficking victims (see Bureau of Justice Statistics, 2011).

Much of the extant research on sex trafficking has focused on its international networks and large-scale geographic patterns in which the source, transit, and/or destination hotspots across several countries and the transport routes linking these nations have been identified (Shelley, 2010; Shelley & Metz, 2017; U.S. Department of State, 2017). For example, in the U.S., most of the trafficked victims—for labor or commercial sex—originate either from within the country or were transported from Mexico or the Philippines (U.S. Department of State, 2017). While the scope of this research has begun to zero in on the prevalence of sex trafficking across regions (Ibanez & Gazan, 2016), counties (Huff-Corzine, Sacra, Corzine, & Rados, 2017), and cities (Dank et al., 2014), to our knowledge, no study has examined the spatial distribution of sex trafficking within a local jurisdiction. We view this to be a critical limitation of the extant research given the number of sex trafficking victims that enter domestic and international networks from within the U.S. Further, compared to federal law enforcement officials, local law

---

[1] Due to the complex nature of this crime, sex trafficking is often confused with human smuggling, kidnapping, and other offenses. Although sex trafficking can involve any of these criminal activities, it does not necessarily require any of them. For example, human smuggling involves foreign nationals being brought into the country illegally with their consent. Cases of human smuggling sometimes become sex trafficking cases when, after entering the destination country, foreign nationals are forced into committing commercial sex acts, sold onto other agents involved in the illicit sex trade, or sexually abused by the smuggler and refused freedom (Texas Department of Public Safety, 2014).

enforcement officials have more opportunities to identify the victims and signs of sex trafficking through their interactions with the homeless and runaway youth, knowledge of local gang activity, and response to domestic violence calls, for example. Therefore, the need for research on the more proximate factors associated with sex trafficking is essential for assisting local police departments and other agencies with their investigative and preventative efforts.

The present study aims to address the gap in research by documenting the prevalence and geographic distribution of sex trafficking offenses occurring in Austin, Texas, between 2013 and 2015. Austin is a prime study site for examining sex trafficking patterns given its location along the western route of the Texas Triangle—a mega-region anchored by the cities of Houston, San Antonio, and Dallas containing over 70% of the Texas population (Neuman & Bright, 2008) where sex trafficking activity is thought to be prevalent (Ellis, 2005; Texas Department of Public Safety, 2014). In addition to examining the spatial concentration of sex trafficking offenses within a local jurisdiction, we draw from criminological theories emphasizing opportunity structure and social disorder to examine whether situational (e.g., access to the interstate highway and the presence of sexually oriented businesses) and socio-demographic (e.g., concentrated disadvantage and residential instability) attributes can explain the observed patterns. Empirical support has been found for these factors and their associations with other types of urban crime and disorder such as prostitution (Aalbers & Sabat, 2012), drug-related offenses (Rengert, Chakravorty, Bole, & Henderson, 2000), and sexual crime (Hewitt, Beauregard, Andresen, & Brantingham, 2018; McCutcheon, Weaver, Huff-Corzine, Corzine, & Burraston, 2016; Weaver, Corzine, Huff-Corzine, McCutcheon, & Vrbas, 2014), and thus, we expect these patterns to extend to sex trafficking. It is the identification of the situational and neighborhood characteristics associated with sex trafficking activity that we believe is most vital to improving our understanding of the phenomenon and its underlying support structure.

2. Theoretical and empirical background

2.1. The geography of sex trafficking

Bearing in mind most sex trafficking incidents are located in space, an assumption may be made that, just like for other crime types, the social and physical environment can facilitate or hinder their occurrence. For instance, the spatial distribution of sex trafficking may be associated with those places where law enforcement does not intensively enforce laws against prostitution activity, including certain strip clubs and cheaper hotels/motels, brothels, massage parlors, and interstate truck stops (Kenyon & Schanz, 2014; LeBeau, 2012; Texas Department of Public Safety, 2014; U.S. Department of Justice, 2017; Voloshin, Derevitskiy, Mukhina, & Karbovskii, 2016; Walker-Rodriguez & Hill, 2011). Indeed, several studies have shown that prostitution activity and the locations of illicit massage parlors tend to exhibit spatial clustering (Chin et al., 2015; Levitt & Venkatesh, 2007), which suggests similar patterns may be observed for sex trafficking offenses. Further, numerous news articles and law enforcement investigations detail sex trafficking incidents in locations where prostitution is effectively decriminalized because the societal characterization of sex work as voluntary and consensual allows sex trafficking enterprises to more easily conceal their operations (Hadjiyanni, Povlitzki, & Preble, 2014; International Centre for Criminal Law Reform and Criminal Justice Policy, 2011; Texas Department of Public Safety, 2014; Walker-Rodriguez & Hill, 2011).

In addition, one characteristic of the physical environment that may be relevant to sex trafficking is access to major interstate highways. Nearby highways may offer ease of access and escape routes, increased familiarity with the area, anonymity afforded by the activity density, and, in the case of sex trafficking, central locations for transfers or transaction sites (Brantingham & Brantingham, 1995). Prior studies have shown highway proximity to increase the prevalence of prostitution (Aalbers & Sabat, 2012), drug-related offenses (Rengert et al., 2000), homicide and drug markets (Weaver et al., 2014), and robbery (McCutcheon et al., 2016), among others.

2.2. Sex trafficking, opportunity, and social disorganization

Following Felson and Clarke (1998), one can describe the spatial patterns above as being the direct result of crime stemming from opportunity. As Cohen and Felson (1979) posited, suitable targets, motivated offenders, and capable guardians are not randomly distributed in space or time given the routine activities of daily life. In other words, the opportunities to engage in crime among individuals interacting in social space give rise to spatial and temporal crime clusters. In the case of sex trafficking, sexually oriented businesses (SOBs), cheaper hotels/motels, truck stops, and proximity to the highway may facilitate the intersection of these three necessary elements: an individual vulnerable to sexual exploitation, a customer willing to purchase a sexual service (or a trafficker looking to recruit a new victim), and the absence of capable guardians to prevent the criminal act.

Due to its emphasis on spatially and temporally dependent criminal opportunities, the routine activity perspective has evolved to become one of the most utilized theoretical frameworks for the geographic and temporal analysis of crime. This perspective, however, is different from other ecological perspectives such as social disorganization theory where the focus is instead on certain community structure characteristics to explain the distribution of crime across areas (Shaw & McKay, 1942; for a recent appraisal of social disorganization theory and a review of the available evidence, see Kubrin & Wo, 2016). Their common spatial nature but different emphases have led some authors to integrate the routine activity perspective and social disorganization theory into hybrid explanatory models of crime (e.g., Andresen, 2006; Sampson & Wooldredge, 1987); and thus, such an approach is also adopted herein.

Social disorganization can be defined as the inability of a community structure to realize the common values of its residents and maintain effective social controls (Bursik, 1988; Sampson & Groves, 1989). It is rare for the constructs more directly related to social disorganization (i.e., informal control, local networks, participation in local organizations) to be directly measured through resident surveys or other methods (but see Sampson & Groves, 1989). Instead, researchers usually estimate such constructs using socio-demographic proxy variables or indices based on national census data. These typically center on three structural concepts originally put forward by Shaw and McKay (1942): concentrated disadvantage, residential instability, and racial and/or ethnic heterogeneity (also see: Bursik, 1988; Gottfredson, McNeil, & Gottfredson, 1991; Sampson & Groves, 1989; Sampson & Wooldredge, 1987). These community characteristics are thought to impede social cohesion by reducing the capacity for residents to organize and establish informal social control (Bursik, 1988; Sampson & Groves, 1989).

Although poor informal control, poverty, instability, and other variables related to social disorganization have been identified as risk factors for sex trafficking, these relationships have mostly been examined at the individual level (e.g., minors lacking informal social/parental control being more vulnerable to exploitation; Reid, 2012) and, within a geography framework, at the macro level (e.g., source countries tend to have higher levels of poverty; Farr, 2005; see also Jiang & LaFree, 2017). One notable exception is Huff-Corzine et al.'s (2017) study of human trafficking in Florida, which examined the influence of several socio-demographic variables at the county level including the percentage of residents who self-identified as Hispanic, the percentage of families who reported living below the poverty line, and the percentage of households described as single-headed. However, none of these variables yielded significant results in the regression analysis—the only significant predictor of whether a county had at least